Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (currently amended) A method for calculating a local mean number of tasks for each processing element (PE_r) in a parallel processing system, wherein each processing element (PE_r) has a local number of tasks associated therewith and wherein r represents the number for a selected processing element, ~~the~~ said method being performed on at least a portion of the parallel processing elements within the processing system, said method comprising:

assigning a value (E_r) to said each processing element (PE_r);

summing a total number of tasks present on said parallel processing system and said value (E_r) for said each processing element (PE_r);

dividing the sum of said total number of tasks present on said parallel processing system and said value (E_r) for said each processing element (PE_r) by a total number of processing elements in said parallel processing system; and

truncating a fractional portion of said divided sum for said each processing element.

2.   (original) The method of claim 1 wherein said assigning a value (E_r) to said each processing element (PE_r) comprises setting said value (E_r) equal to a number between 0 and ($N -$ 1), where N represents said total number of processing elements in said parallel processing system.

3.   (original) The method of claim 2 wherein said assigning a value (E_r) to said each processing element (PE_r) further comprises giving a unique number to said each value (E_r) for said each processing element PE_r.

4.   (original) The method of claim 1 wherein said assigning a value (E_r) to said each processing element (PE_r) comprises setting said value (E_r) equal to said number for a selected processing element (r).

5.   (currently amended) The method of claim 1 wherein ~~said value (E_r) controls~~ said truncating ~~step~~ is responsive to said value for E_r such that said total number of tasks for said parallel processing system equals the sum of said local mean number of tasks for each processing element (PE_r) in said parallel processing system.

6.   (currently amended) The method of claim 1 wherein said local mean number of tasks for each processing element (PE_r) within said parallel processing system is equal to one either ~~of~~ X or ~~and~~ (X +1).

7.   (cancelled)

8.   (currently amended) The method of claim 1 wherein said ~~assigning step, said summing step, said dividing step, and said truncating step are completed~~ method is performed on a line of said processing elements within said parallel processing system.

9.   (currently amended) The method of claim 1 wherein said ~~assigning step, said summing step, said dividing step, and said truncating step are completed~~ method is performed on a loop of said processing elements within said parallel processing system.

10.   (currently amended) The method of claim 1 wherein said ~~assigning step, said summing step, said dividing step, and said truncating step are completed~~ method is preformed on an array of said processing elements within said parallel processing system.

11.   (currently amended) The method of claim 1 wherein said ~~assigning step, said summing step, said dividing step, and said truncating step are completed~~ method is performed on an array of two or more interconnected processing elements within said parallel processing system.

12.   (currently amended) A computer readable memory device carrying a set of instructions which, when executed, perform a method comprising:

   assigning a value (E_r) to said each processing element (PE_r);

   summing a total number of tasks present on said parallel processing system and said value (E_r) for said each processing element (PE_r);

   dividing the sum of said total number of tasks present on said parallel processing system and said value (E_r) for said each processing element (PE_r) by a total number of processing elements in said parallel processing system; and

   truncating a fractional portion of said divided sum for said each processing element.